

# **SITE SCREENING ASSESSMENT**

**Prepared by: Rafiq Ahmed  
California Department of Toxic Substances Control  
Cooperative Agreement Number: V-97999001 - 0  
DTSC Fiscal Year: 2009-2010**

**Prepared for: Carl Brickner  
United States Environmental Protection Agency  
Region 9  
States, Planning, and Assessment Office  
San Francisco, California**

**Date: May 20, 2010  
Revised Date: September 7, 2010**

**Site Name: CHERRY AEROSPACE  
City: Santa Ana  
County: Orange  
EPA ID Number: CAD008493603  
CADTSC Envirostor ID Number: 60001102  
DTSC Regional Office: Cypress (4)**

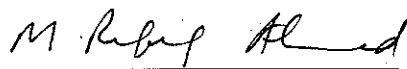

## EXECUTIVE SUMMARY

<b>Site Name:</b>	Cherry Aerospace		
<b>EPA ID Number:</b>	CAD008493603		
<b>Envirostor ID:</b>			
<b>Site Screen</b>	YES: <input checked="" type="checkbox"/>	NO: <input type="checkbox"/>	
<b>Site Reassessment</b>	YES: <input type="checkbox"/>	NO: <input checked="" type="checkbox"/>	

## Findings and Recommendation :

<b>Pre-Triage Recommendation</b>			
Refer to: <input type="checkbox"/> EPA <input checked="" type="checkbox"/> CADTSC <input type="checkbox"/> CARWQCB <input type="checkbox"/> Local Agency			
<b>FORWARD TO TRIAGE:</b>	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>
		No	
<b>Post-Triage Recommendation</b>			
Refer to: <input type="checkbox"/> EPA <input type="checkbox"/> CADTSC <input type="checkbox"/> CARWQCB <input type="checkbox"/> Local Agency			

## Final Signatures and Concurrence:

DTSC Screener:	 Signature	Rafiq Ahmed Type Name	09/07/2010 Date: (MM/DD/YYYY)
DTSC Approval:	 Signature	Greg Holmes Type Name	9/7/10 Date: (MM/DD/YYYY)
EPA Concurrence:	_____ Signature	Carl Brickner Type Name	_____ Date: (MM/DD/YYYY)

# **SITE SCREENING ASSESSMENT (SSA)**

Site Screening: ☒

Site Reassessment: ☐

## **Section 1: Site Information**

**1.1: Site Name:** Cherry Aerospace

**Other Names:** Cherry Aerospace (2007), Textron Fastening Systems / Acument Global Technologies (2003), Textron Aerospace Fasteners (1995), Cherry Textron (1959), Cherry Townsend (1951), Cherry Rivet Company (1940)

**1.2: Origin of Site under assessment:**

**Discovery Project/Name:** Southeast Santa Ana Site Discovery Project

or

**Referral from other Agency/Name:**

or

**Complaint/ Name:**

or

**In CERCLIS (for Reassessments):**

**1.3: Site Location Information**

**Street Address:** 1224 E. Warner Avenue

**City:** Santa Ana      **County:** Orange

**State:** CA      **Zip Code:** 92705

**Latitude:** 33.71594      **Longitude:** -117.85607

**Acres:** +/- 15

**1.3 Regulatory Information:**

**CERCLIS?** No

**RCRA site?** No

**SLIC site?** No

**LUFT site?** Yes

**UST site?** Yes

**WIP site?** No

**Landfill site?** No

**Local Agency site?** Yes

**Envirostor ID:** 60001102

**EPA ID:** CAD008493603

**Geotracker ID:** None

**Geotracker Case Number:** None

**Is the contamination petroleum related:** No

## **Section 2: Operational History**

Historical owners/operators that may have used Hazardous Materials onsite:  
Specify dates and materials that may have been used:

**Current owner:** Precision Castparts Corp (PCC)

**Current operator:** Cherry Aerospace

**Hazardous materials used:** sodium cyanide, nitric acid, sulfuric acid, cadmium, solvents

**Dates of operation:** 3/31/2007 – to date

**Owners:** Textron, Inc.

**Operators:** Textron Aerospace Fasteners (TAF)

**Hazardous materials used:** chromium, cyanide, alkali and oily rinse waste, metal sludge, sludge thickeners.

**Hazardous materials suspected:** nitric acid, sulfuric acid, cadmium, wastewater

**Dates of operation:** 2003 – 2007

**Owners:** Textron, Inc.

**Operators:** Cherry Textron

**Hazardous materials used:** 1,1,1-trichloroethane (1,1,1-TCA), TCE, methylene chloride, Freon-113, Vythane D, and Safety Solvent "C".

**Hazardous materials suspected:** nitric acid, sulfuric acid, cadmium, wastewater

**Dates of operation:** 1996 - 2003

**Owners:** Textron, Inc.

**Operators:** Cherry Division of Textron

**Hazardous materials used:** Sulfuric Acid, petroleum liquids and waste oil, paints, thinners and spray painting cans, potassium hydroxide, virgin oils,

**Hazardous materials suspected:** nitric acid, sulfuric acid, cadmium, wastewater

**Dates of operation:** 1959 - 1996

**Owners:** Townsend Company of New Brighton, Pennsylvania

**Operators:** Cherry Rivet Division (aka Boots Aircraft Nut Division) of Townsend Company

**Hazardous materials used:** acids and basic chemicals, solvents, caustics, diesel, machine oil, lube oil, cutting oils and draw oils, waste oils and virgin oils, oily water, sludge thickeners, wastewater, soap rinse, asbestos, argon, propane,

**Hazardous materials suspected:** Paint

**Dates of operation:** 1952 - 1959

**Owners:** Unknown before 1952

**Operators:** Unknown before 1952

**Hazardous materials used:** Unknown before 1952

**Hazardous materials suspected:** Unknown before 1952

**Dates of operation:** Unknown before 1952

### **Section 3: Site Impact Information**

**What is the site setting:** Urban

**Details:** Cherry Aerospace site is located at 1224 E. Warner Avenue, Santa Ana, Orange County, California 92705 (**Attachment 1**). The facility is located within an industrial and commercial area.

**Land use surrounding the site:** Industrial/Commercial/Residential

**Details:** The site is bounded by railroad tracks and Sakioka Farms (a machinery storage area) on the east, parking lot and single-family residential area on the west and south, and Warner Avenue, a small commercial area and other industrial units on the north.

**Are there residences within 200 feet:** Yes

**Details:** Single-family residential units are located on the south, west and north-west of the site.

**Are there schools/day care centers within 200 feet:** No

**Details:** The closest school is approximately one mile away.

**Surface water within 2 miles of the site?** No

**Details:**

**Are there any sensitive environments or wetlands within 2 miles of site:** No

**Details:**

**Is this site a source of contamination to surface water?** No

**Details:**

**Is surface water used for drinking water within 15 miles of the site?** No

**If yes, is the surface water used for public / commercial supply:**

**If yes, is the surface water used for private supply:**

**If yes, approximately how many people served by the surface water:**

**Details:**

**Is groundwater used for drinking water within 4 miles of site?** Yes

**If yes, are the drinking wells public / commercial:** Yes or private

**If yes approximately how many people served by the ground water:** 9000

**Details:** According to the Irvine Water District (IRWD), IRWD supplies water to a population of more than 230,000 persons in the south central Orange County (IRWD, 2003). The average daily demand of about 40 million gallons is met through 18 active groundwater wells and imported water from Metropolitan Water District. Approximately 35% of IRWD's drinking water is purchased from the Metropolitan Water District of Southern California. The remaining 65 % comes from local public wells.

**Is groundwater within 4 miles of the site known to be contaminated with hazardous substances** Yes

**If yes, what hazardous substances :** Three chemicals of concern, tetrachloroethene (PCE), trichloroethene (TCE) and perchlorate, have been detected in a drinking water supply well, IRWD-3, in the Dyer Road Wellfield (DRWF).

**If yes, do any of the levels exceed drinking water standards?** Yes

**Details:** According to an Orange County Water District (OCWD) Technical Memorandum and Work Plan July 2007, the highest concentrations of PCE (500 ug/L) and TCE (776 ug/L) in regional monitoring wells are found in Well No. SCC-D1 located on the Holchem/Service Chemical site, approximately 2,400 feet northeast of IRWD-3. Maximum concentrations of PCE and TCE in IRWD-3 have been 5.5 ug/L and 2 ug/L, respectively. PCE has been detected above the maximum contaminant level (MCL) for drinking water of 5 ug/L in only two samples and TCE has not been detected higher than the MCL of 5 ug/L. Perchlorate detections have ranged from 2.8 ug/L to 7.9 ug/L and exceeded the California proposed MCL of 6 ug/L in four samples from IRWD-3 well. The distribution of perchlorate detections is slightly different than the VOC detections. IRWD-3 has been taken out of service due to VOC detections. Areas northeast of IRWD-3 may represent the area of highest risk to the water supply wells based on subsurface geology, predominant groundwater flow directions, capture zones of pumping wells, and estimated time of travel. Monitoring wells at some facilities, within a half-mile radius of IRWD-3 in the northeast, contain some of the highest concentrations of PCE, TCE, and/or perchlorate.

**Is this site a source of ground water contamination?** Yes

**Details:** Water quality monitoring data for groundwater production well IRWD-3 located approximately 400 feet west southwest of Cherry Aerospace site, show concentrations of VOCs, including trichloroethene (TCE), tetrachloroethylene (PCE), 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113) and 1,4-dioxane in groundwater samples from this well. During the inspection of the facility on May 4, 2007, Cherry Aerospace informed DTSC that the chlorinated solvents PCE, TCE and Freon 113 were used for cleaning until they were phased out about 12 years ago. Groundwater monitoring wells were installed in May 2010 at this site, under DTSC oversight. A total of 20 groundwater samples including duplicate samples (from wells CDM-MW-3S and 3D) were collected during the May 2010 groundwater investigation activities and analyzed for VOCs including 1,4-dioxane. The laboratory analytical results identified 17 VOCs and 1,4-dioxane above the reporting limits in the groundwater samples; 10 of the VOCs – including PCE and TCE and their breakdown products- methylene chloride, and 1,4-dioxane were above the MCLs. Concentrations of TCE detected in groundwater samples from the shallow and deeper zone wells at CDM-MW-3S/3D and CDM-MW-6S/6D (1,100 ug/l maximum TCE detected in the shallow well; 400 ug/l in the deeper well) are higher than concentrations of 27 ug/l in the shallow zone sample and below the reporting limit in the deeper groundwater sample from monitoring well No. CDM-MW-9S/9D.

**Any Community Involvement?** No

**Details:**

## Site Reconnaissance

1. **Date of visit:** 3/23/2010

2. **Adjacent properties:**

**North:** Warner Avenue and commercial/industrial units

**South:** Railroad tracks and single-family residential units

**East:** Railroad tracks and other light industrial units

**West:** Single-family residential units

3. **Structures onsite (e.g. Office Bldg, Paint Booth, Repair Shop etc.):** The Cherry Aerospace facility contains an Oil Wastewater Treatment Unit, Chromium Treatment Unit and Sludge Dryer unit. A Storage area is located in the Chemical Storage Building on the southwest corner of the property. In addition, parking, a storage building, a maintenance building and a wastewater treatment area are located adjacent to the facility buildings. The metal finishing process wastewater pretreatment facility is located at the southwest corner of the site. The main entrance to the facility is located along Warner Avenue. For more detail refer to the basic site plan (**Attachment 2**).

4. **Any visual staining:** Unknown

5. **Any hazardous Materials storage onsite:** Yes

According to the inspection conducted by DTSC and USEPA on February 5, 2004, hazardous materials were observed to be stored on site. The purpose of the inspection was to verify the information in the Phase I Environmental Site Assessment Checklist (Phase I Checklist) submitted by Cherry Textron to DTSC on December 16, 1996.

6. **Specify any hazardous Materials used onsite:** Yes

Type of waste streams included aqueous waste with inorganics, sludges, oily water, and alkaline/acidic waste.

7. **Indicate if following are present onsite, specify volume, content and how many:**

a) **Drums:** Yes

b) **ASTs:** Yes

c) **USTs:** No, but historically up to eight USTs were on site in the past. However, according to Phase I Environmental Site Assessment, November 2005, by ENSR International, three historical USTs, one 900-gallon, one 3,060-gallon and one 4,200-gallon UST were listed on EDR's Radius Map. At least the two larger USTs are known to have been present at the site. Although the tanks are out of use and were reported filled with slurry, there is no information available regarding possible leaks, sampling as part of the closure process, or other information, which adequately documents that the tanks or piping did not cause a release to soil or groundwater.

d) **Clarifiers:** Yes

e) **Other:** 15 sumps, located outside the plating area, used as secondary holding tanks. For more detail refer to tank schedule (**Attachment 3**).

## **8. Any transformers containing PCBs? Unknown**

## **9. Any previous sampling results: Yes**

According to the Phase I Environmental Site Assessment, November 2005, by ENSR International, an asbestos survey was conducted in 1985 and found asbestos in the steam pipe insulation, four furnaces, various vinyl floor tiles and roof duct sealer and mastic. Following the survey, asbestos was removed from the steam pipe insulation and replaced with fiberglass. The asbestos was also removed from four furnaces. The vinyl floor tiles were encapsulated and then, in some areas, covered with carpeting.

A limited soil investigation was conducted in March 2002 at the Plating Shop associated with the Surface Preparation Area located in the eastern portion of the site. Twelve (12) shallow soil borings identified as borings T-1 through T-12 on a site plan were advanced inside and in the vicinity of the Surface Preparation Area consisting of an Alodine Area, an Anodize Area and a Chromate Dip Area. Soil samples were collected from near surface, at 2.5-feet below ground surface (bgs) and 5-feet bgs and analyzed for Title 22 Metals by EPA Method 7000 Series analyses for Total Threshold Limit Concentrations (TTLC) and for pH by EPA Method 9045C. Available data provided to Camp Dresser & McKee Inc (CDM) indicated that pH results were mostly in the alkaline range (greater than 7 and as high as 10.5 in sample T-9 collected from near surface located in the vicinity of a trench drain in the southeastern corner of the room). One soil sample had a pH of 5.6 (sample T-3 collected from near surface). Laboratory analytical data for Title 22 Metals indicated that none of the soil samples analyzed exceeded the TTLC for metals.

A limited Phase II site investigation, January 2008, was conducted by CDM under DTSC oversight. A total of 17 volatile organic compounds (VOCs) were detected in 100 soil samples, above the method detection limit (MDL). A total of 28 VOCs were detected above the MDL in 42 soil gas samples collected from the site. The highest TCE concentration in soil gas was detected from the former Cherrymax vapor degreaser area collected at a depth of 4.5 feet below the concrete floor level. The corresponding TCE concentration in soil was only 13 ug/kg; suggesting that the potential source was nearby and had not been defined. A total of four (4) groundwater samples were collected using a Geoprobe. The highest concentrations of VOCs (TCE=340 ug/l, PCE = 12 ug/l) were detected in the groundwater sample from a parts washer located in the vicinity of the Heat Treat Area.

A total of 79 soil samples were analyzed for Title 22 Metals, cyanides, and pH. In addition, ten (10) soil samples collected from four soil borings advanced in the vicinity of the purported locations of the two USTs were analyzed for organic lead. Organic lead was not detected above the reporting limit. Metal concentrations were within the range of concentration for naturally occurring metals in soils. Two soil samples which contained elevated concentrations of total chromium were further analyzed for hexavalent chromium. One soil sample from a cyanide wastewater sump area (Sump-3) from the 1-foot depth contained 200 mg/kg of total chromium which was analyzed for hexavalent chromium by EPA Method 7199. The sample was non-detected (below 0.40 mg/kg) for hexavalent chromium. The pH results for soil samples generally ranged from 7.2 to a high of 11, reported in two samples collected from chemical storage area sump and trench drain. Total cyanides were detected in 9 of the soil samples (collected from Sump 3 and 4, and wastewater treatment plant and wastewater collection tanks located south end of the facility) analyzed and ranged from 0.32 mg/kg to 1.3 mg/kg (Attachment 5).



## **Section 4: Recommendations/Conclusions**

**Does the site pose an immediate threat and require Removal? No**

**Have there been any historical releases at the site: Yes**

**Based on the site reconnaissance and/or regulatory search is there a potential for a release at the site? Unknown**

Based on the site inspection dated June 18, 2009, Cherry Aerospace submitted a Workplan for Further Investigation (FI) on October 8, 2009 which supplements prior investigations. A Revised FI Workplan was submitted on January 27, 2010. DTSC approved the Workplan on January 28, 2010. DTSC received Draft FI Report on August 9, 2010. Based on the results of the FI and the previous investigation, chlorinated VOCs, primarily TCE, PCE, and their breakdown products exceed their screening levels in soil, soil gas and groundwater samples collected from soil borings, soil gas probes and groundwater monitoring wells installed at the site. DTSC recommends conducting a human risk assessment to characterize risks to onsite and offsite receptors using data for VOCs in onsite soil, soil gas, and on-site groundwater and potentially offsite groundwater. Based on the results of the risk assessment, options for the short and long-term mitigation/control of VOCs that are present in the onsite soils, soil gas, and groundwater may also have to be evaluated. Such evaluation would involve conducting a feasibility study (FS) or corrective measures study.

## Summary

Cherry Aerospace (Cherry-Textron) is located at the southeast corner of East Warner Avenue and South Standard Avenue, approximately ½ mile west of the Costa Mesa (55) Freeway in the City of Santa Ana, Orange County, California. The site is in an area zoned for light industrial use. Cherry Aerospace and its predecessor companies have been sole tenants of the main building since its construction in 1952.

The site is approximately 15 acres in size. Single family residences are located west and northwest of the site. The site is a manufacturing facility for different fasteners used in the aerospace industry. The facility consist of a main building, a maintenance shop, a chemical storage building, and a wastewater treatment plant, associated paved driveways and parking lots. The facility layout is shown in the facility Site Plan.

Results of the site investigation by Camp Dresser & McKee Inc (CDM) indicated elevated concentrations of VOC's detected in soil vapor, soil matrix, and groundwater samples both inside and outside of the facility. The levels of all VOCs detected were above the respective CHHSL value. On May 2, 2008, CDM submitted the results of the Cherry Aerospace site investigation and their recommendations for further investigation to define vertical and/or lateral extent of VOC impacted soil and contamination to DTSC.

Based on inspections and visual observations in February and March 2009 by Innovative Consultants Incorporated, there are a total of 30 active tanks and vessels included in the wastewater pretreatment tank system at Cherry Aerospace facility. The principal processes in the process wastewater pretreatment systems are wastewater equalization, oil separation, metals conversion, metals removal and cyanide destruction, flocculation and sedimentation, sludge thickening, sludge dewatering, and sludge drying (**Attachment 4**).

The preliminary results of the FI August 2010 and the previous investigation show the presence of chlorinated VOCs, primarily TCE, PCE, and their breakdown products exceeding their screening levels in soil, soil gas and groundwater samples collected from soil borings, soil gas probes and groundwater monitoring wells installed at the site. Concentrations (maximum) of TCE detected in groundwater samples from the shallow and deeper zone well CDM-MW-6S/6D are 1,100 ug/l and 400 ug/l respectively. DTSC recommends conducting a human risk assessment to characterize risks to onsite and offsite receptors using data for VOCs in onsite soil, soil gas, and on-site groundwater and potentially offsite groundwater. Based on the results of the risk assessment, options for the short and long-term mitigation/control of VOCs that are present in the onsite soils, soil gas, and groundwater may also have to be evaluated. Such evaluation would involve conducting a feasibility study (FS) or corrective measures study.

**Attachment A**  
**SITE SCREENING ASSESSMENT CONTACT REPORT**

**Site Name:** Cherry Aerospace    **Site Screener:** Rafiq Ahmed

Contact Name	Affiliation	Telephone Number	Date	Discussion
Elouise Root-Administration	Santa Ana Fire Dept.	714-647-5757	2/2/2010	Visited Santa Ana Fire Dept. and reviewed the records
Katherine Arrasmith	OC Health Care Agency Environmental Health	714-433-6029	1/26/2010	Sent Letter to OCHCA (EH) for Record Review.
Katherine Arrasmith	OC Health Care Agency Environmental Health	714-433-6029	2/24/2010	Visited OCHCA (EH) office and did the file review.
David P. Bolin	OC Water District	714-378-3245	3/04/2010	Called as well as sent e-mail for Record Review. Received CDs containing site record
Robert Romero	DTSC	714-484-54	5/18/2010	Discussed the status of current investigation and Further Investigation (FI) and the recommended remedial and/or removal action plan.

## **Attachment B**

### **SITE EVALUATION MAP AND BACKUP COVER PAGE**

<p style="text-align: center;"><b>Attachment C</b>  <b>SITE SCREENING ASSESSMENT ATTACHMENT INDEX</b>  <b>Site Name: Cherry Aerospace      Site Screener: Rafiq Ahmed</b></p>			
<b>Attachment #</b>	<b>Document Title</b>	<b>Date</b>	<b>Details of Attachment</b>
1	Site Location Map	02/05/2004	This map was provided to DTSC by Cherry Aerospace.
2	Site Plan	10/19/2005	Site sampling Locations with adjacent properties
3	Wastewater Treatment Flow Diagram	03/19/2009	Equalization Process
4	Site Investigation Results	02/08/2008	Camp Dresser & McKee (CDM) conducted the site investigation
5	Tank Schedule Site Photos	03/19/2009	Tanks/vessels in use with year in service
5	Site Photos	03/23/2010	Site and Surrounding Views
6	EnviroStor Site Map	05/17/2010	EnviroStor Site Map

## Attachment D

### SITE TYPE – PRIMARY/SECONDARY ACTIVITY FORM

Fed Facility Indicator: ☐ Federal Facility ☒ Not A Federal Facility ☐ Status Undetermined

RCRA Status: ☒ Generator ☐ TSDF ☐ Transporter ☐ Not listed in RCRAIS

**SITE TYPES** (Designate one dominant primary category (PC). Designate all secondary subcategories (SS) that apply.) Site type designations for both primary & secondary should pertain to the operation(s) on site of environmental consequence.

P	S	Manufacturing/Processing/Maintenance	P	S	Other
C	S	(Subcategory)	C	S	(Subcategory)
<input type="checkbox"/>	<input type="checkbox"/>	Chemicals and allied products	<input type="checkbox"/>	<input type="checkbox"/>	Agricultural
<input type="checkbox"/>	<input type="checkbox"/>	Coal gasification	<input type="checkbox"/>	<input type="checkbox"/>	Contaminated sediment site with no identifiable source
<input type="checkbox"/>	<input type="checkbox"/>	Coke production	<input type="checkbox"/>	<input type="checkbox"/>	Dust control
<input type="checkbox"/>	<input type="checkbox"/>	Electric power generation and distribution	<input type="checkbox"/>	<input type="checkbox"/>	Ground water plume site with no identifiable source
<input type="checkbox"/>	<input type="checkbox"/>	Electronic/electrical equipment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Military/other ordinance
<input type="checkbox"/>	<input type="checkbox"/>	Fabrics/textiles	<input type="checkbox"/>	<input type="checkbox"/>	Product storage/distribution
<input type="checkbox"/>	<input type="checkbox"/>	Lumber and wood products/pulp and paper	<input type="checkbox"/>	<input type="checkbox"/>	Research, development, and testing facility
<input type="checkbox"/>	<input type="checkbox"/>	Lumber and wood products/wood preserving/treatment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Retail/commercial
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Metal fabrication/finishing/coating and allied industries	<input type="checkbox"/>	<input type="checkbox"/>	Spill or other one time event
<input type="checkbox"/>	<input type="checkbox"/>	Oil and gas	<input type="checkbox"/>	<input type="checkbox"/>	Transportation (e.g. railroad yards, airports, barge docking site)
<input type="checkbox"/>	<input type="checkbox"/>	Ordnance production	<input type="checkbox"/>	<input type="checkbox"/>	Treatment works/septic tanks/other sewage treatment
<input type="checkbox"/>	<input type="checkbox"/>	Plastics and rubber products			
<input type="checkbox"/>	<input type="checkbox"/>	Primary metals/minerals processing	P	S	Mining
<input type="checkbox"/>	<input type="checkbox"/>	Radioactive products	C	S	(Subcategory)
<input type="checkbox"/>	<input type="checkbox"/>	Tanneries	<input type="checkbox"/>	<input type="checkbox"/>	Coal
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Trucks/ships/trains/aircraft and related components	<input type="checkbox"/>	<input type="checkbox"/>	Metals
			<input type="checkbox"/>	<input type="checkbox"/>	Non-metals minerals
			<input type="checkbox"/>	<input type="checkbox"/>	Oil and gas
P	S	Waste Management			
C	S	(Subcategory)			
<input type="checkbox"/>	<input type="checkbox"/>	Radioactive waste treatment, storage, disposal	P	S	Recycling
<input type="checkbox"/>	<input type="checkbox"/>	Municipal solid waste landfill	C	S	(Subcategory)
<input type="checkbox"/>	<input type="checkbox"/>	Mine tailings disposal	<input type="checkbox"/>	<input type="checkbox"/>	Automobiles/tires
<input type="checkbox"/>	<input type="checkbox"/>	Industrial waste landfill	<input type="checkbox"/>	<input type="checkbox"/>	Batteries/scrap metals/secondary smelting/precious metal recovery
<input type="checkbox"/>	<input type="checkbox"/>	Industrial waste facility (non generator)	<input type="checkbox"/>	<input type="checkbox"/>	Chemicals/chemicals waste (e.g. solvent recovery)
<input type="checkbox"/>	<input type="checkbox"/>	Illegal disposal/open dump	<input type="checkbox"/>	<input type="checkbox"/>	Drums/tanks
<input type="checkbox"/>	<input type="checkbox"/>	Co-disposal landfill (municipal and industrial)	<input type="checkbox"/>	<input type="checkbox"/>	Waste/used oil

**SITE TYPES** (Designate one dominant primary category (PC). Designate all secondary subcategories (SS) that apply.)

# Attachment E

## SITE SCREENING ASSESSMENT SAMPLING EVENT SUMMARY TABLE

Site Name:			Cherry Aerospace 1224 E. Warner Avenue, Santa Ana, CA 92705			Site Screener:		Rafiq Ahmed	
Date	Event	Media	Location	Depth	Method	Quality	Result	Benchmark	
03/2002	Limited Soil Investigation	Soil	12 shallow soil borings (T-1 – T-12) at Plating Shop associated with the Surface Preparation area	2.5' – 5' below ground surface (bgs)	EPA 7000 Series for Title 26 Metals  EPA 9045C For pH	- No QA/QC available	Laboratory analytical data for Title 26 metals indicated that none of the soil samples analyzed exceeded the Total Threshold Limit Concentrations (TTLC) for metals.  pH values were mostly in the alkaline range (greater than 7 and as high as 10.5 in sample T-9 collected from near surface located in the vicinity of a trench drain in the southeastern corner of the Plating Shop). However, one soil sample had a pH of 5.6 (sample T-3 collected from near surface.	<u>RSL</u>	
05/02/08	Site Investigation	Soil	100 soil samples collected from 24 areas	1', 5', 10' below ground surface	EPA 5035 VOCs	- No QA/QC available	A total of 17 volatile organic compounds (VOCs) were detected above the method detection limit (MDL).  PCE: 28 mg/kg detected in soil sample SSA-012308-S1-1'  TCE: 8.7 mg/kg detected in soil sample SUMP2-012408-S1-10'	1.3 mg/kg by EPA Region IX PRG 0.11 or 6.5 mg/kg California Modified PRG	

Attachment E (Continued)									
SITE SCREENING ASSESSMENT SAMPLING EVENT SUMMARY TABLE									
Site Name:		Cherry Aerospace 1224 Warner Avenue, Santa Ana, CA 92705			Site Screener:		Rafiq Ahmed		
Date	Event	Media	Location	Depth	Method	Quality	Result	Benchmark	
05/02/08	Site Investigation	Soil Gas	42 soil gas samples collected from indoor and outdoor locations	5', 10' below ground surface	EPA 8260B VOCs	QA/QC available	A total of 28 VOCs were detected above MDL. The highest concentrations detected in soil gas from indoor locations were:  TEC: 1,100.00 ug/m3 for former Vapor Degreaser Cherry Max Area  PCE: 6,700 ug/m3 for former Parts Washer PW1 Heat Treat Area	1,770 ug/m3 CHHSLs  603 ug/m3 CHHSLs	
		Water	4 samples collected using a Geo-probe	10' – 20' Below ground surface	EPA 8260B VOCs		The highest concentration of VOCs was detected in the groundwater sample from Parts Washer PW-1 located in the vicinity of the Heat Treat Area.  TCE: 340 ug/L  PCE: 12 ug/L	5 ug/L  5 ug/L	
		Total Petroleum Hydro – carbons (TPH) in Sol	73 soil samples collected from 25 borings	1' – 5' below ground surface	EPA 8015 Modified		TPH: 1,100 mg/kg in soil sample SUMP3012708-S1-5 at the 5-foot depth  TPH: 1,500 mg/kg in soil sample SCS-012208-S1-1 at 1-foot depth	1,000 mg/kg	

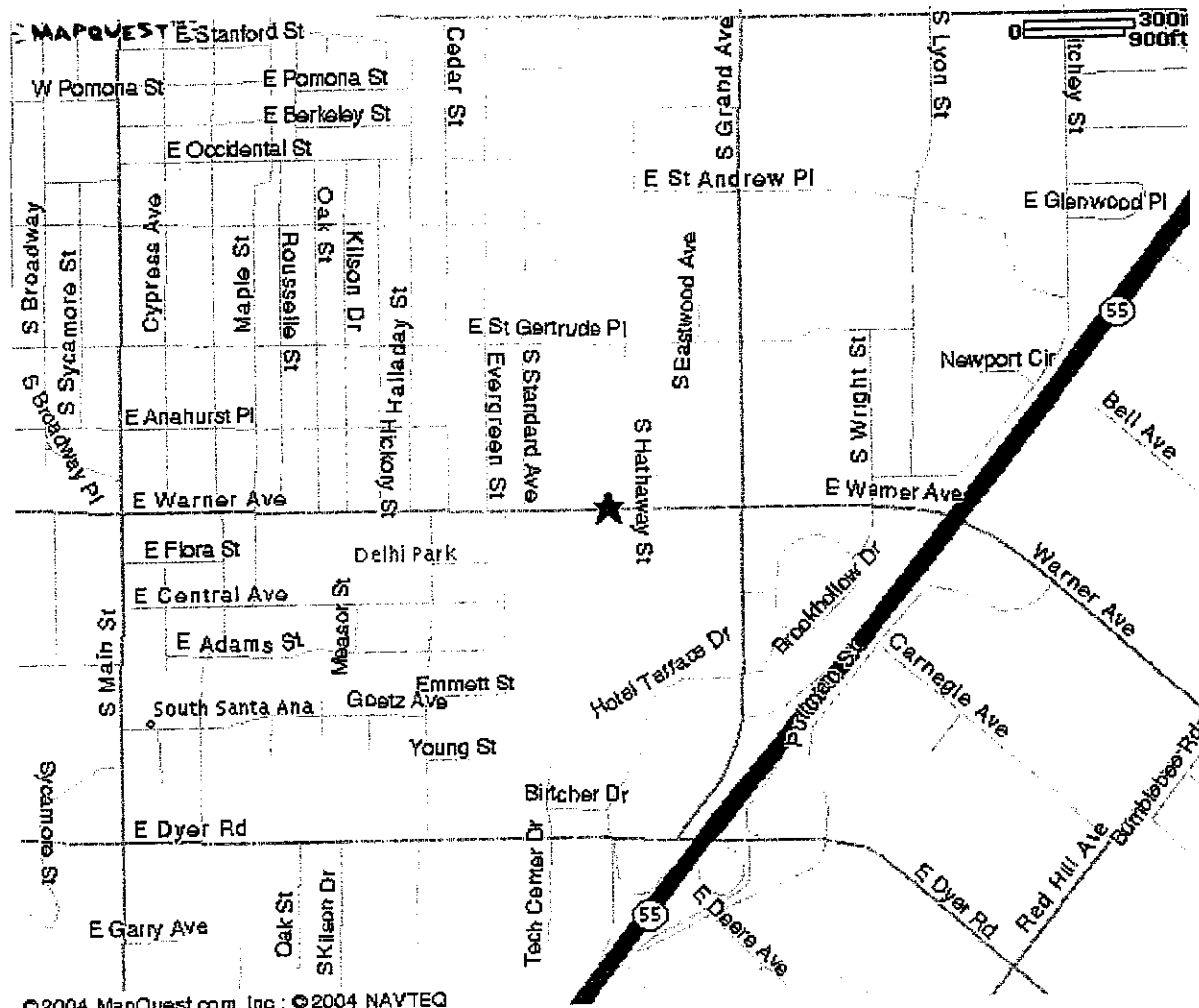


Attachment E (Continued)							
SITE SCREENING ASSESSMENT SAMPLING EVENT SUMMARY TABLE							
Site Name:		Cherry Aerospace 1224 E. Warner Avenue, Santa Ana, CA 92705		Site Screener:		Rafiq Ahmed	
Date	Event	Media	Location	Depth	Method	Quality	Result
05/02/08	Site Investigation	Petroleum Hydrocarbons in ground-water	Only two (2) of four (4) groundwater samples collected were in sufficient quantity due to slow and limited recharge	10' – 20' below ground surface	EPA 8015 Modified	QA/QC available	Toluene: 0.51 ug/L near UST-2 tank TPH: 0.14 mg/L GRO: 1.2 mg/L near PW-1 area (Gasoline range organics)
		Title 22 metals, Cyanides, and pH in soil	79 soil samples + 10 soil samples collected from four soil borings advanced in the vicinity of two USTs	1-foot	EPA 7199		Total Chromium: 200 mg/kg in one soil sample SUMP3012708-S1-1  pH: 7.2 to (high) 11 at storage area sump and trench drain  Total Cyanide: 0.32 mg/kg to 1.3 mg/kg
05/2010	Further Investigation	Ground-water	20 ground-water samples from shallow and deeper zone wells	38' – 48' bgs for shallow zone and 55' – 70' bgs for deeper zone	EPA 8260B VOCs	QA/QC available	Total Chromium is 1.4E+03 mg/kg  EPA PRG for cyanides (free) is 1,200 mg/kg for industrial soils  TCE: 5 ug/L
							Maximum concentration of TCE was 1,100 ug/L in the shallow well and 400 ug/L in the deeper well)

The Site Screening Assessment (SSA) is used for preliminary data gathering and planning purposes. All findings and recommendations are subject to change if new information necessitating further consideration is discovered.

# **Attachment 1**

## **Site Location Map**

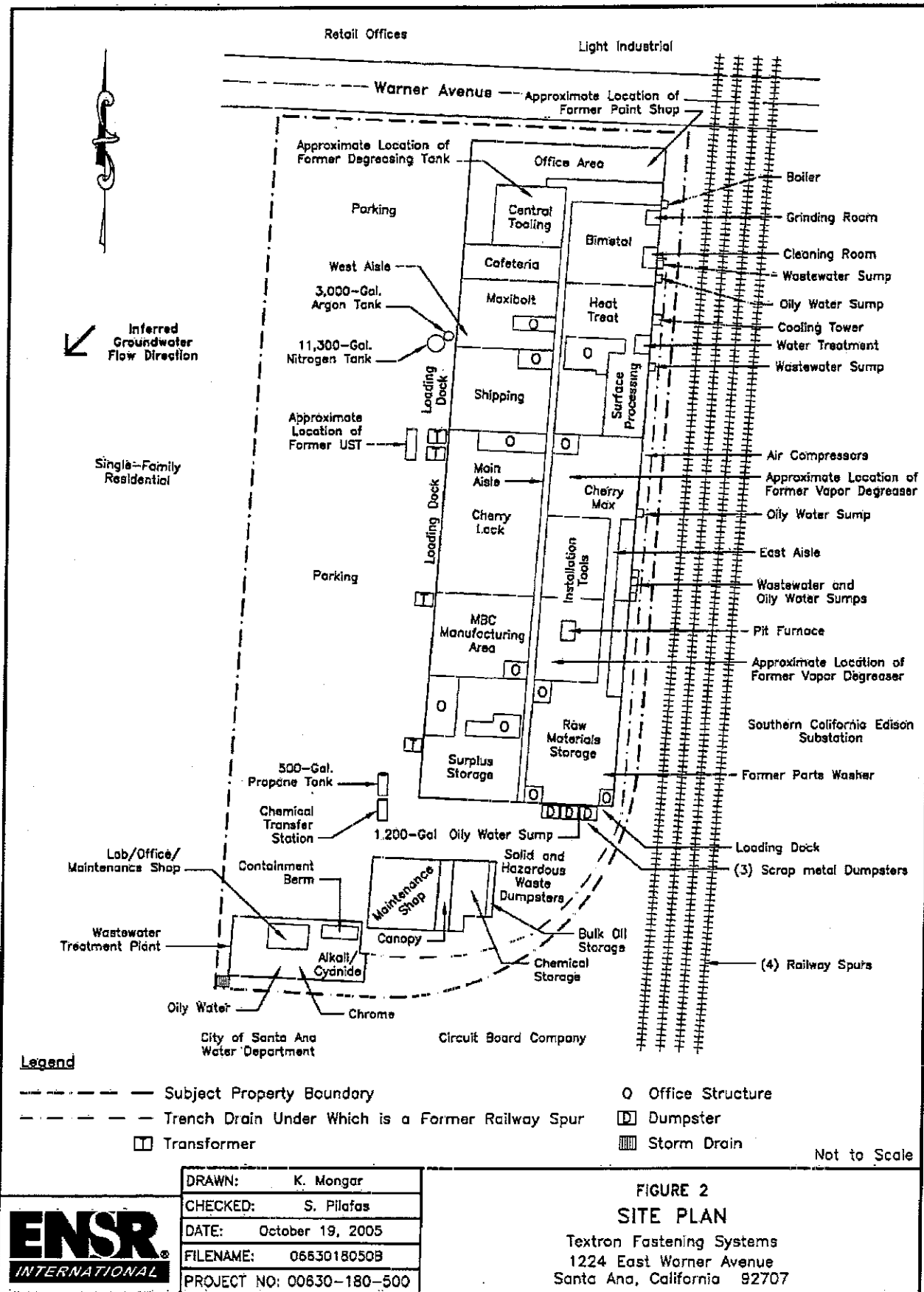


**Figure 1 – Site Location Map**

Department of Toxic Substances Control TPCAB	Project Name: Textron Fastening Systems 1224 East Warner Avenue Santa Ana, California 92707	Date: 02/05/04
	EPA I.D. Number: CAD008493603	Scale: unknown

## **Attachment 2**

### **Site Plan**

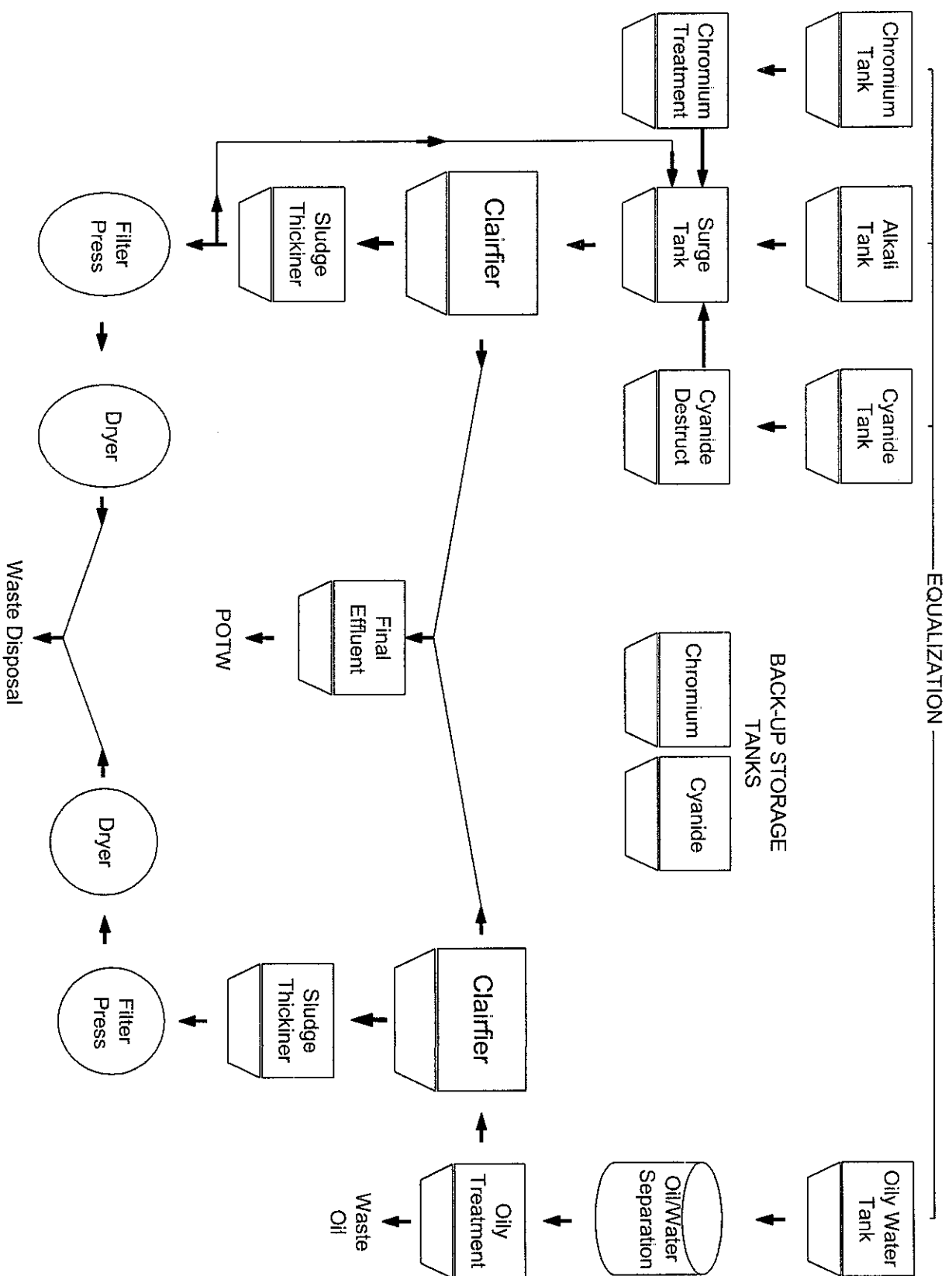


OCWD\_SB004542

## **Attachment 3**

### **Wastewater Treatment Flow Diagram**

# CHERRY AEROSPACE WASTEWATER TREATMENT FLOW DIAGRAM



## **Attachment 4**

### **Site Investigation Results**



Attachment A  
Cherry Aerospace - Santa Ana, California  
Site Investigation Results

Summary of VOC Results

*Volatile Organic Compounds in Soil*

A total of 17 volatile organic compounds (VOCs) were detected in 100 soil samples above the method detection limit. The VOCs detected are listed on Table 1. The following paragraph and table list the highest concentrations detected in soil samples compared to VOC screening levels in soil developed by the US EPA Region 9 for industrial soils:

- 1,1,1-TCA: 33 milligrams per kilogram (mg/kg) in soil sample SSA-012308-S1-1'
- 1,1,2-TCA: 0.031 mg/kg detected in soil sample SSA-012308-S1-10'.
- 1,1-DCA: 2.9 mg/kg detected in soil sample SSA-012208-S2-10'.
- 1,1-DCE: 2 mg/kg detected in soil sample SSA-012308-S1-10'.
- 1,2-DCA: 0.037 mg/kg detected in soil sample SSA-012308-S1-1'.
- Cis-1,2-DCE: 29.0 mg/kg detected in soil sample DS-012408-S1-1'.
- Ethylbenzene: 0.0068 mg/kg detected in soil sample SSA-012308-S1-1'.
- Isopropylbenzene: 0.52 mg/kg detected in soil sample SUMP3012708-S1-5'.
- m, p-xylene: 0.016 mg/kg detected in soil sample SSA-012308-S1-1'.
- Methylene chloride: 0.19 mg/kg detected in soil sample SSA-012308-S1-1'.
- O-xylene: 0.0059 mg/kg detected in soil sample SSA-012308-S1-1'.
- Sec-butylbenzene: 0.93 mg/kg detected in soil sample SUMP3012708-S1-5'.
- PCE: 28 mg/kg detected in soil sample SSA-012308-S1-1'.
- Toluene: 0.12 mg/kg detected in soil sample SSA-012308-S1-1'.
- Trans-1,2-DCE: 5.9 mg/kg detected in soil sample SUMP3012708-S1-5'.
- ICE: 8.7 mg/kg detected in soil sample SUMP2-012408-S1-10'.
- Vinyl chloride: 0.0073 mg/kg detected in soil sample SSA-012308-S1-1'.

Table 1				
VOC	Sample ID with Highest Conc.	Concentration (mg/kg)	EPA Region IX PRG <sup>(1)</sup>	# of Samples Above PRG
1,1,1-TCA	SSA-012308-S1-1'	33	1,200	None
1,1,2-TCA	SSA-012308-S1-10'	0.031	1.6	None
1,1-DCA	SSA-012208-S2-10'	2.9	1,700 (6) <sup>(2)</sup>	None
1,1-DCE	SSA-012308-S1-10'	2.0	410	None
1,2-DCA	SSA-012308-S1-1'	0.037	0.6	None
Cis-1,2-DCE	DS-012408-S1-1'	29.0	150	None
Ethylbenzene	SSA-012308-S1-1'	0.0068	400	None
Isopropylbenzene	SUMP3012708-S1-5'	0.52	2,000	None
m, p-xylene	SSA-012308-S1-1'	0.016	420 <sup>(3)</sup>	None
Methylene chloride	SSA-012308-S1-1'	0.19	21	None
O-xylene	SSA-012308-S1-1'	0.0059	420 <sup>(3)</sup>	None
Sec-butylbenzene	SUMP3012708-S1-5'	0.93	220	None
PCE	SSA-012308-S1-1'	28	13	11
Toluene	SSA-012308-S1-1'	0.12	520	None
Trans-1,2-DCE	SUMP3012708-S1-5'	5.9	230	None
TCE	SUMP2-012408-S1-10'	8.7	0.11 (6.5) <sup>(2)</sup>	20 (2)
Vinyl Chloride	SSA-012308-	0.0073	0.75	None

	S1-1'			
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## Notes:

- (1) PRGs shown are Preliminary Remediation Goals developed by the US EPA Region 9 for industrial soils and assume a direct exposure model and based on continuous off-gassing of vapors over a 30 year period (October 2004).
- (2) The second value shown is a California Modified PRG developed by the DTSC
- (3) The PRG for m,p-xylene and o-xylene have not been developed separately. Value shown is for total xylenes
- (4) California Human Health Screening Levels (CHHSLs) for contaminated properties prepared by Cal EPA have not been developed for bulk soils and Cal EPA recommends using soil gas concentrations for indoor exposure instead to determine risk.

*Volatile Organic Compounds in Soil Gas*

A total of 28 VOCs were detected above the MDL in 42 soil gas samples collected from the site. The highest VOC concentrations detected in soil gas from indoor locations are summarized below and compared to Cal EPA CHHSLs for VOCs for which CHHSLs for shallow soil gas are available. CHHSLs typically do not take into account site-specific factors such as the attenuation factors from the a thick floor slab with epoxy coatings, type of soil, or the depth of the soil gas sample and results in a soil gas screening value which is highly conservative. Therefore, the detected soil gas concentrations were used to calculate preliminary screening level health risk numbers using the Johnson & Ettinger vapor intrusion model used by the DTSC vapor intrusion guidance document (last modified January 2005). The results are presented in Table 2 below:

Table 2							
Area	Highest Soil Gas Conc. Detected for VOCs (ug/m3)						
	Benzene	TCE	PCE	Vinyl Chloride	Cis-1,2-DCE	Trans 1,2-DCE	Toluene
<b>Indoor Locations Only</b>							
Former Vapor Degreaser – Central Tooling	820						4,200
Former Vapor Degreaser Cherry Max		1,100,000	--	--	--	--	
Former Parts Washer PW1 Heat Treat Area			6,700	--	--	--	
VOC Room			--	17,000	410,000	760,000	
CHHSLs <sup>(1)</sup> (Industrial/commercial sites)	122	1,770	603	44.8	44,400	88,700	37,800
# of Samples Exceeding CHHSLs	4	9	6	5	2	2	None

<i>Risk using Johnson &amp; Ettinger Model<sup>(2)</sup></i>	<i>0.19/100,000</i>	<i>3.3/100,000</i>	<i>0.51/100,000</i>	<i>6.8/100,000</i>	<i>HQ = 1.9</i>	<i>HQ = 1.7</i>	<i>HQ = 0.00273</i>
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## Notes:

(1) CHHSLs published by Cal EPA January 2005.

(2) Johnson & Ettinger Vapor Intrusion Model – from the DTSC's website at [http://www.dtsc.ca.gov/AssessingRisk/JE\\_Models.cfm](http://www.dtsc.ca.gov/AssessingRisk/JE_Models.cfm)

The risk calculations above are preliminary and do not take into account all site-specific information.

A review of the soil gas data for both indoor and outdoor locations indicates the following:

- Soil gas samples from the upgradient sample location did not contain detectable concentrations of VOCs
- The highest ICE concentration in soil gas was detected in the soil gas sample from the former Cherrymax vapor degreaser area collected at a depth of 4.5 feet below the concrete floor level (deeper soil gas samples could not be collected due to refusal from encountering a secondary concrete slab at the 4.5 feet depth). The corresponding TCE concentration in soil was only 13 ug/kg, suggesting that the potential source is nearby and has not been defined.
- Detections of Freon 113 appear to be localized near the former solvent storage area and chemical storage area.
- Freon 11 was not detected in soil gas above the reporting limit
- A preliminary risk screening by comparing the soil gas concentrations to the CHHSLs developed by Cal EPA indicates a number of samples for the six of the seven VOCs for which CHHSLs are listed as exceeding the soil screening levels. However, the CHHSLs methodology cannot be used for setting site cleanup levels per the Cal EPA and do not take into account site-specific factors, such as slab thickness with any engineering controls already in-place such as epoxy coating which can change the attenuation factor, ventilation rate, and site-specific soil gas data (soil type, depth of sample).
- A preliminary risk analysis using the vapor intrusion model developed by Johnson & Ettinger indicated that using site-specific factors, the risk for benzene and PCE are below the threshold of 1 in 100,000 for commercial/industrial properties. The risk results for TCE and vinyl chloride are marginally higher than the allowable threshold listed above. The risk for cis-1,2-DCE and trans-1,2-DCE are based on route-to-route extrapolation and would need a more detailed exposure assessment. Therefore, a detailed risk assessment incorporating all site-specific information may indicate that the risks are acceptable.

*Volatile Organic Compounds in Groundwater*

Depth to groundwater varied at the site from approximately 10 feet to 20 feet below ground surface (bgs). Shallower groundwater was present (between 6 and 7 feet bgs) along the eastern length of the site reportedly due to a broken sprinkler pipe in the area. Shallow groundwater was also present (approximately 6 feet bgs) in the southern portion in the vicinity of the wastewater sumps presumably from minor water infiltration from the sumps.

A total of four (4) groundwater samples were collected using a Geoprobe. The summary of the groundwater sampling results is presented below:

- The background groundwater sample collected from a relatively upgradient location to the site did not contain detectable concentrations of VOCs.
- The highest concentration of VOCs was detected in the groundwater sample from parts washer PW-1 located in the vicinity of the Heat Treat Area.
- The groundwater sample collected from the vicinity of a former UST did not contain any VOCs except for toluene at a concentration of 0.51 µg/L and total petroleum hydrocarbons (IPH) at 0.14 milligrams per liter (mg/L).
- Only two VOCs (1,1-DCA and 1,1-DCE) were detected in the groundwater sample collected from the southern edge of the site at concentrations of 9.3 µg/L and 3.5 µg/L, respectively.

Table 3 below summarizes the VOC results for groundwater samples and compares the data to US EPA's maximum contaminant levels (MCLs) for drinking water.

VOC Detected	Sample ID with Highest Conc.	Concentration (µg/L)	EPA MCL <sup>(1)</sup> (µg/L)	# of Samples Above MCL
TCE	PW1-HP1	340	5	1
1,1-DCA	PW1-HP1	34	None	None
1,1-DCE	PW1-HP1	7.7	7	1
Toluene	UST2-HP1	0.51	1	None
PCE	PW1-HP1	12	5	1

## Notes:

- (1) MCLs from USEPA dated June, 2003

Comparison of VOCs Detected at Cherry Aerospace to IRWD Well and  
Upgradient Holchem Facility

Table 4				
VOC Detected	VOCs Detected in IRWD Well IRWD-3	VOCs Detected in Groundwater at Cherry Aerospace	VOCs Detected in Soil/Soil Gas at Cherry Aerospace	VOCs Detected in Well SCC-D1 Upgradient
1,1,1-TCA	No	No	Yes	Yes
1,1,2-TCA	No	No	Yes	Yes
1,1-DCA	No	Yes	Yes	Yes
1,1-DCE	No	Yes	Yes	Yes
1,2-DCA	No	No	Yes	Yes
Cis-1,2-DCE	No	No	Yes	Yes
Benzene	No	No	Yes	Yes
Freon 113	Trace	No	Yes	Yes
PCE	Yes	Yes	Yes	Yes
TCE	Yes	Yes	Yes	Yes
Toluene	No	Trace	Yes	Yes

Summary of Petroleum Hydrocarbon Results

*Petroleum Hydrocarbons in Soil*

A total of 73 soil samples collected from 25 soil borings were analyzed for total petroleum hydrocarbons (TPH) carbon-chain (C8-C40) and gasoline range organics (GRO) using EPA Method 8015 Modified. Detectable concentration of TPH was present in 14 of the soil samples. GRO concentrations were detected in six of the soil samples.

TPH concentration above 1,000 mg/kg was detected in only two soil samples identified below:

- TPH was detected at a concentration of 1,100 mg/kg primarily in the C18-C36 hydrocarbon range in the soil sample SUMP3012708-S1-5 at the 5-foot depth from the vicinity of Sump-3 located in the eastern portion of the facility.

- IPH was detected at a concentration of 1,500 mg/kg primarily in the C18-C36 hydrocarbon range in the soil sample SCS-012208-S1-1 at the 1-foot depth from the vicinity of Steam Cleaning Shed located in the southern portion of the facility
- IPH concentrations were detected in the 1-foot soil samples from the purported locations of the two former USTs. The maximum concentration detected was 440 mg/kg from soil sample UST1-012108-S1-1.

A GRO concentration above 100 mg/kg was not detected in any soil samples. The two areas where detectable concentrations of GRO were present are in the vicinity of Sump-3 and the former solvent storage area. GRO was not detected in the purported area of the two former USTs.

#### *Petroleum Hydrocarbons in Groundwater*

Due to a slow and limited recharge into the Geoprobe casing, only two (2) of the four groundwater samples collected were in sufficient quantity for TPH and GRO analysis. The summary of the groundwater sampling results for TPH/GRO is presented below:

- The groundwater sample collected from the vicinity of a former USI (UST-2) located in the southwestern portion of the facility did not contain any volatile aromatics or fuel oxygenates except for toluene at a concentration of 0.51 µg/L and TPH concentration of 0.14 mg/L. The hydrocarbons detected are in the C10-C28 range, generally associated with diesel and lubricating oils
- A detectable concentration of GRO was detected in the groundwater sample from the parts washer PW-1 located in the vicinity of the Heat Treat Area at a concentration of 1.2 mg/L.

#### Summary of Title 22 Metals, Cyanides, and pH Analysis Results

##### *Title 22 Metals, Cyanides, and pH Results for Soil*

A total of 79 soil samples were analyzed for Title 22 Metals, cyanides, and pH. In addition, ten (10) soil samples collected from four soil borings advanced in the vicinity of the purported locations of the two USTs were analyzed for organic lead.

- Organic lead was not detected above the reporting limit in the 10 USI area soil samples analyzed.
- Metal concentrations are within the range of concentration for naturally occurring metals in soils in the conterminous United States.
- Two soil samples which contained elevated concentrations of total chromium were further analyzed for hexavalent chromium. One soil

sample from a cyanide wastewater sump area (Sump-3) identified as sample SUMP3012708-S1-1 from the 1-foot depth contained 200 mg/kg of total chromium which was analyzed for hexavalent chromium by EPA Method 7199. The sample was non-detected (below 0.40 mg/kg) for hexavalent chromium. The second sample identified as

- One soil sample from a cyanide wastewater sump area (Sump-3) identified as sample SUMP3012708-S1-1 from the 1-foot depth contained 200 mg/kg of total chromium which was further analyzed for hexavalent chromium by EPA Method 7199. The sample was non-detected (below 0.40 mg/kg) for hexavalent chromium.
- The pH results for soil samples generally ranged from 7.2 to a high of 11 reported in two samples (reported at the chemical storage area sump and trench drain).
- Total cyanides were detected in 9 of the soil samples analyzed and ranged from 0.32 mg/kg to 1.3 mg/kg. The cyanide concentrations detected are limited to the cyanide wastewater sumps (Sump-3 and Sump-4) and the wastewater treatment plant and the wastewater collection tanks located to the south end of the facility. The EPA PRG for cyanides (free) is 1,200 mg/kg for industrial soils.



### Summary of Soil Gas Analytical Results- Volatile Organic Compounds

[illegible]

Table 4-8  
Summary of Soil Gas Analytical Results- Volatile Organic Compounds  
Cherry Aerospace Former Traxton Fostering Systems Facility

Area of Interest	Location Description	Location ID	Sample Depth	Date Collected	Sample Type	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2,4-TMB	1,2-DGB	1,2-DGP	1,3,5-TMB	2,2,4-TMP	MEK	2-Propanol	4-ET	Acetone	Benzene	Carbon Disulfide	CE	CFM	ds-1,2-DCE
Main wastewater collection sump at end of trench carrying wastewater	East of wastewater treatment compound	WPCS-SG1	10	25-Jan-08	Human Health Screening Levels	7,900,000	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	122	NE	100 U	100 U	100 U
Wastewater collection tanks, two only	Southwestern portion of site	WPCS-SG1	18	25-Jan-08		230	1400	26000	NE	NE	NE	NE	NE	NE	NE	NE	NE	440	NE	100 U	100 U	100 U
Wastewater pools, chrome wastewater tank		WPCS-SG2	5	25-Jan-08		1100	3600	11000	NE	NE	NE	NE	NE	NE	NE	NE	NE	80 U	NE	100 U	440	560
		WPCS-SG3	5	25-Jan-08		700 U	790 U	1700	NE	NE	NE	NE	NE	NE	NE	NE	NE	80 U	NE	100 U	100 U	740 U
Wastewater treatment plant for chrome wastewater with treatment equipment open, sealed and three sumps	Southwestern portion of site	WPCS-SG1	10	27-Jan-08	Superclean	100 U	100 U	100 U	54	NE	NE	13	11 U	6.9 U	23 U	38	32	23	12 U	100 U	100 U	230
		WPCS-SG2	10	27-Jan-08		100 U	100 U	100 U	NE	NE	NE	NE	NE	NE	NE	NE	NE	80 U	NE	100 U	100 U	100 U
		WPCS-SG2	20	27-Jan-08		100 U	100 U	100 U	NE	NE	NE	NE	NE	NE	NE	NE	NE	80 U	NE	100 U	100 U	100 U

Notes:  
Results are in ug/m3  
NE = Not Analyzed  
Bldd values exceed CHSLS  
Only results detected in at least one sample are presented in this table.  
100 U = Nondetect result at a reporting limit of 100  
1 = Estimated Value  
CHSLS = California Human Health Screening Levels from the Sept. 2005 Table 2.  
Soil Gas Screening Numbers for Volatile Chemicals below Buildings Constructed with Engineered Fill below Sub-Asp. Gravel  
CE = Chloroethene, CFM = Chloroform, DCA = Dichloroethane, DCE = Dichloroethene, DGP = Dichloropropane, EB = Ethylbenzene, EDB = Ethylene Dibromide (1,2-Dibromethane), ET = Ethyltoluene, MEK = Methyl Ethyl Ketone (2-Butanone), MEK = m-Xylene, MTBE = Methyl Tertiary Butyl ether, PCE = Tetrachloroethene, TCA = Trichloroethane, TCE = Tetrachloroethene, TMB = Trimethylbenzene, TMP = Trimethylpentane, VC = Vinyl Chloride  
Soil gas samples analyzed by a fixed laboratory and by EPA Method 8260S for the January 2008 soil gas samples and by EPA Method TO-15 for the April-May 2008 samples

Table 4-6  
Summary of Soil Gas Analytical Results-Volatile Organic Compounds  
Chemistry Aerospace (Former Textron Fastening Systems) Facility

Area of Interest	Location Description	Location ID	Sample Depth	Date Collected	Sample Type	Cyclohexane	Ethanol	EB	Freon 113	Freon 12	Heptane	Hexane	MPX	Methylene Chloride	o-Xylene	PCE	Toluene	trans-1,2-Dichloroethane	TCE	VC
	Shallow Soil Gas Commercial/Industrial Human Health Screening Levels				NE	NE	NE	NE	NE	NE	NE	NE	2,200,000	27000 U	2100000	1600	370000	240000	4,400	95
Area of Interest	Location Description	Location ID	Sample Depth	Date Collected	Sample Type	Cyclohexane	Ethanol	EB	Freon 113	Freon 12	Heptane	Hexane	MPX	Methylene Chloride	o-Xylene	PCE	Toluene	trans-1,2-Dichloroethane	TCE	VC
Lubricating Oil ASTs	East of Chemical Storage Building	AST-SG1	20	23-Jan-08	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
Background	Northern property line	BS-SG1	5	28-Jan-08	NE	NE	NE	NE	NE	NE	NE	NE	200 U	100 U	100 U	100 U	200 U	100 U	100 U	100 U
VOC Room with MEK and Toluene	Adjacent C-Max Area West of Dry Lub Shop	BS-SG2	6	05-May-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
Boilers		BT-H-SG1	20	28-Jan-08	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		BT-H-SG2	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		BT-H-SG3	18	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		BT-H-SG4	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		BT-H-SG5	10	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		BT-H-SG6	10	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
Chemical storage area with sump and trench drain	Southwest portion of site	CSA-SG1	2	22-Jan-08	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG2	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG3	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG4	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG5	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG6	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG7	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG8	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG9	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG10	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG11	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG12	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG13	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG14	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG15	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG16	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG17	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG18	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG19	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG20	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG21	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG22	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG23	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG24	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG25	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG26	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG27	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG28	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG29	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG30	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG31	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG32	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG33	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG34	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG35	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG36	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG37	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG38	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG39	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG40	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG41	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG42	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG43	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG44	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG45	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG46	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG47	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG48	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG49	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG50	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG51	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG52	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG53	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG54	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG55	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG56	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG57	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG58	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG59	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG60	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG61	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG62	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG63	6	18-Apr-10	NE	NE	NE	NE	NE	NE	NE	NE	200 U	400 U	100 U	100 U	200 U	100 U	100 U	100 U
		CSA-SG64	6	18-Apr-10	NE	NE	NE	NE												

Table 4-6  
Summary of Soil Gas Analytical Results- Volatile Organic Compounds  
Cherry Aerospace Former Testion (Fasting Systems) Facility

Area of Interest	Location Description	Location ID	Sample Depth	Date Collected	Sample Type	Cyrtolox	Ethanol	EB	Freon 113	Freon 12	Heptane	Hexane	MPX	Methylene Chloride	o-Xylene	PCE	Toluene	trans-1,2-DCE	TCE	VC
Main wastewater collection sump at end of French carrying wastewater	Shallow Soil Gas Commercial/Industrial Human Health Screening Levels	WCS-SG1	13	25-Jan-08	---	NE	NE	150	100 U	100 U	---	---	510	100 U	120	1200	1800	100 U	120	100 U
Wastewater collection tanks Two city	---	WCS-SG1	16	25-Jan-08	---	---	---	170	100 U	100 U	---	---	570	100 U	140	290	2500	100 U	510	100 U
Wastewater pool/chrome wastewater tank	---	WCS-SG2	5	25-Jan-08	---	---	---	100 U	3200	100 U	---	---	220	100 U	100 U	8500	500	100 U	820	100 U
Wastewater treatment plant for chrome and cyanide wastewater with treatment area surface epoxy sealed and three sumps	---	WCS-SG3	5	25-Jan-08	Duplicate	---	---	100 U	5000 U	100 U	---	---	200 U	100 U	100 U	2400 U	200 U	100 U	220 U	100 U
	---	WCS-SG3	10	25-Jan-08	Duplicate	8 U	18 U	25	600 U	12 U	10	8.2 U	120	8.1 U	42	3500 U	150	8.2 U	170 U	6 U
	---	WTP-SG1	10	27-Jan-08	---	---	---	100 U	100 U	100 U	---	---	200 U	100 U	180 U	950	200 U	100 U	370	100 U
	---	WTP-SG2	20	27-Jan-08	---	---	---	100 U	100 U	100 U	---	---	200 U	100 U	180 U	1500	200 U	100 U	370	100 U
	---	WTP-SG2	10	27-Jan-08	---	---	---	100 U	100 U	100 U	---	---	200 U	100 U	180 U	1500	200 U	100 U	370	100 U
	---	WTP-SG2	20	27-Jan-08	---	---	---	100 U	100 U	100 U	---	---	200 U	100 U	180 U	1500	200 U	100 U	370	100 U
	---	WTP-SG2	20	27-Jan-08	---	---	---	100 U	100 U	100 U	---	---	200 U	100 U	180 U	1500	200 U	100 U	370	100 U

Results are in ug/g  
 --- = Not Analyzed  
 NE = Not Established  
 Bolded Values exceed CHSLs  
 Only results detected in at least one sample are presented in this table.  
 100 U = Non-detect result at a reporting limit of 100  
 J = Estimated value

CHSLs = California Human Health Screening Levels Values from "Use of CHSLs in Evaluation of Contaminated Properties, January 2005, California EPA.  
 CE = Chloroethane, CFM = Chloroform, DCA = Dichloroethane, DCB = Dichlorobenzene, DCE = Dichloroethane, DCP = Dichloropropane, EB = Ethylbenzene, Dibromide (1,2-Dibromomethane), ET = Ethylbenzene, MEK = Methyl Ethyl Ketone (2-Butanone), MPX = m-Xylene, MTBE = Methyl tert-butyl ether, PCE = Tetrachloroethene, TCA = Trichloroethane, TCE = Trichloroethane, TMB = Trimethylbenzene, TMP = Trimethylpentane, VC = Vinyl Chloride

**Table 4-7**  
**Summary of Groundwater Analytical Results - Volatile Organic Compounds**  
**Cherry Aerospace (Former Textron Fastening Systems) Facility**

Area of Interest	Location Description	Location ID	Sample Depth	Date Collected	Sample Type	1,1-1,1-TC	1,1,2-TC	1,1-DCA	1,1-DCE	1,2-DCA	1,4-Dioxane	Benzene	Bromine	CFM	Chloroform	cis-1,2-DCE	Methylene Chloride	Naphthalene	PCE	Toluene	trans-1,2-DCE	TCE	VC
Background/Potential Upgradient Sources	Asphalt-paved driveway, NE corner of property	MM1D	61-68	5/13/2010	MCLs	200	5	5	5	0.5	3 (NL)	1	NE	NE	0.50	0.65	5	5	5	1.2	0.50	18	0.50
	Asphalt-paved driveway, NW corner of property in parking space	MM2D	42-52	5/13/2010		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	2.7	0.50 U
	Western side of manufacturing building	MM2S	42-52	5/11/2010		0.50 U	0.50 U	16	120	14	48	0.50 U	0.50 U	1.3	0.50 U	110	1.0 U	0.50 U	5.7	0.50 U	0.51	2.0	8.2
	Western side of manufacturing building	MM3D	55-70	5/12/2010	Duplicate	0.50 U	0.50 U	0.69	15	0.50 U	5.1	0.54	0.50 U	0.50 U	0.50 U	0.70	12	0.50 U	0.50 U	0.50 U	0.50 U	71	0.50 U
Potential Offsite Sources to East	South of city water sump	MM3S	55-70	5/12/2010	Duplicate	0.50 U	0.50 U	0.78	17	0.50 U	5.1	0.63	0.50 U	0.50 U	0.50 U	0.78	14	0.50 U	0.50 U	0.50 U	0.50 U	79	0.50 U
		MM3S	38-48	5/12/2010	Duplicate	2.0 U	2.0 U	11	17	2.0 U	3.3	2.0 U	2.0 U	2.0 U	2.0 U	15	4.0 U	2.0 U	5.8	2.0 U	2.0 U	940	2.0 U
		MM3S	38-48	5/12/2010	Duplicate	2.0 U	2.0 U	11	17	2.0 U	3.3	2.0 U	2.0 U	2.0 U	2.0 U	15	4.0 U	2.0 U	5.8	2.0 U	2.0 U	940	2.0 U
		MM3S	38-48	5/12/2010	Duplicate	2.0 U	2.0 U	11	17	2.0 U	3.3	2.0 U	2.0 U	2.0 U	2.0 U	15	4.0 U	2.0 U	5.8	2.0 U	2.0 U	940	2.0 U
Former Parts Washer, Chemical Booths, and Former Chrysler Degreaser	Southwestern side of manufacturing building	MM6D	55-65	5/12/2010		1.0 U	1.0 U	1.6	52	1.0 U	3.3	1.0 U	1.0 U	1.1	1.0 U	3.4	5.7	1.0 U	1.0 U	1.0 U	1.0 U	400	1.0 U
		MM6S	42-50	5/12/2010		2.0 U	2.0 U	2.0 U	3.6	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.4	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1100	2.0 U
		MM6S	42-50	5/12/2010		2.0 U	2.0 U	2.0 U	3.6	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.4	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1100	2.0 U
		MM6S	42-50	5/12/2010		2.0 U	2.0 U	2.0 U	3.6	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	6.4	4.0 U	2.0 U	2.0 U	2.0 U	2.0 U	1100	2.0 U
Former Solvent Storage Area, Drum Storage Area, ASTs, and Chemical Storage Building	South of steam cleaning shed near the property line	MM7D	57-72	5/18/2010		0.50 U	0.50 U	1.5	11	0.50 U	6.2	0.50 U	0.50 U	0.50 U	0.50 U	0.50	1.0 U	0.50 U	3.4	0.50 U	0.50 U	40	0.50 U
		MM7S	42-47	5/18/2010		0.50 U	0.50 U	16	130	0.50 U	66	0.50 U	0.50 U	0.50 U	0.50 U	4.4	1.0 U	0.50 U	75	0.50 U	0.50 U	200	0.50 U
		MM8D	57-72	5/19/2010		0.50 U	0.50 U	9.5	24	0.50 U	5.3	0.50 U	0.50 U	0.50 U	0.50 U	2.2	1.0 U	0.50 U	4.1	0.50 U	0.50 U	160	0.50 U
		MM8S	37-47	5/17/2010		0.50 U	0.50 U	26	24	0.50 U	5.2	0.50 U	0.50 U	0.50 U	0.50 U	1.6	1.0 U	0.50 U	4.5	0.50 U	0.50 U	170	0.50 U
Existing Wastewater Sumps Along Southwestern Property Boundary	Southwestern portion of property, north of wastewater treatment compound	MM9D	38-48	5/17/2010		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	2.0 U	0.50 U	0.50 U	0.50 U	0.54	0.50 U	1.0	0.50 U	0.50 U	0.50 U	0.50 U	2.1	0.50 U
		MM9S	41-48	5/14/2010		0.50 U	0.50 U	0.83	2.6	0.50 U	2.0 U	0.50 U	0.50 U	0.50 U	0.50 U	5.6	3.6	0.50 U	0.50 U	0.50 U	0.50 U	260	0.50 U
		MM9S	41-48	5/14/2010		0.50 U	0.50 U	0.83	2.6	0.50 U	2.0 U	0.50 U	0.50 U	0.50 U	0.50 U	5.6	3.6	0.50 U	0.50 U	0.50 U	0.50 U	260	0.50 U
		MM9S	41-48	5/14/2010		0.50 U	0.50 U	0.83	2.6	0.50 U	2.0 U	0.50 U	0.50 U	0.50 U	0.50 U	5.6	3.6	0.50 U	0.50 U	0.50 U	0.50 U	260	0.50 U
Former Parts Washer (CAE Ranshoff Equipment Area)	North of Maintenance Shop	PM1-HP1	10	1/27/2008		0.50 U	0.50 U	34	7.7	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	280	1.0 U	0.50 U	12	0.50 U	24	340	1.7
		PM1-HP1	10	1/27/2008		0.50 U	0.50 U	34	7.7	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	280	1.0 U	0.50 U	12	0.50 U	24	340	1.7
		PM1-HP1	10	1/27/2008		0.50 U	0.50 U	34	7.7	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	280	1.0 U	0.50 U	12	0.50 U	24	340	1.7
		PM1-HP1	10	1/27/2008		0.50 U	0.50 U	34	7.7	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	280	1.0 U	0.50 U	12	0.50 U	24	340	1.7
Former UST (unknown product)	Southwestern portion of site	UST2-HP1	10	1/27/2008		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.51	0.50 U	0.50 U	0.50 U	0.50 U
		UST2-HP1	10	1/27/2008		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.51	0.50 U	0.50 U	0.50 U	0.50 U
		UST2-HP1	10	1/27/2008		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.51	0.50 U	0.50 U	0.50 U	0.50 U
		UST2-HP1	10	1/27/2008		0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.51	0.50 U	0.50 U	0.50 U	0.50 U
Background sample	Northern property line	WTP4-HP1	20	1/28/2008		0.50 U	0.50 U	9.3	3.5	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
		WTP4-HP1	20	1/28/2008		0.50 U	0.50 U	9.3	3.5	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
		WTP4-HP1	20	1/28/2008		0.50 U	0.50 U	9.3	3.5	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
		WTP4-HP1	20	1/28/2008		0.50 U	0.50 U	9.3	3.5	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	1.0 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
VOC Room with MEK and Toluene Boilers	Adjacent C-Max Area/West	8TH-534HP1	20	4/19/2010		5.0 U	5.0 U	8.5	5.6	5.0 U	—	5.0 U	5.0 U	5.0 U	5.0 U	740	10 U	5.0 U	5.0 U	5.0 U	340	3500	5.0 U
		8TH-534HP1	20	4/19/2010		5.0 U	5.0 U	8.5	5.6	5.0 U	—	5.0 U	5.0 U	5.0 U	5.0 U	740	10 U	5.0 U	5.0 U	5.0 U	340	3500	5.0 U
		8TH-534HP1	20	4/19/2010		5.0 U	5.0 U	8.5	5.6	5.0 U	—	5.0 U	5.0 U	5.0 U	5.0 U	740	10 U	5.0 U	5.0 U	5.0 U	340	3500	5.0 U
		8TH-534HP1	20	4/19/2010		5.0 U	5.0 U	8.5	5.6	5.0 U	—	5.0 U	5.0 U	5.0 U	5.0 U	740	10 U	5.0 U	5.0 U	5.0 U	340	3500	5.0 U
Chemical storage area with sump and trench	Southern portion of site	CSA-55-H2	25	4/9/2010		1.5	0.50 U	75	160	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	6.2	1.0 U	0.50 U	0.50 U	0.50 U	0.51	0.50 U	1.5
		CSA-55-H2	25	4/9/2010		1.5	0.50 U	75	160	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	6.2	1.0 U	0.50 U	0.50 U	0.50 U	0.51	0.50 U	1.5
		CSA-55-H2	25	4/9/2010		1.5	0.50 U	75	160	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	6.2	1.0 U	0.50 U	0.50 U	0.50 U	0.51	0.50 U	1.5
		CSA-55-H2	25	4/9/2010		1.5	0.50 U	75	160	0.50 U	—	0.50 U	0.50 U	0.50 U	0.50 U	6.2	1.0 U	0.50 U	0.50 U	0.50 U	0.51	0.50 U	1.5

**NOTES**  
Groundwater Samples analyzed for VOCs by EPA Method 8260B, for 1,4-dioxane by EPA Method 8270C, and for Title 22 Metals by EPA Method 60107/470.  
Results are in µg/L.  
"—" = Not Analyzed  
Only results detected in at least one sample are presented in this table.  
100 U = Nondetect result at a reporting limit of 100  
J = Estimated value  
MCL = California Maximum Contaminant Limit (California Code Regulation, Title 22)  
NE = Not Established  
NL = Notification Level, Notification levels are health-based advisory levels established by California Department of Public Health for chemicals in drinking water that lack MCLs.  
CFM = Chloroform; DCA = Dichloroethane; DCE = Dichloroethene;  
PCE = Tetrachloroethene; TCA = Trichloroethane; TCE = Trichloroethene; VC = Vinyl  
Boded values exceed MCL

**Table 4-8**  
**Summary of Groundwater Analytical Results - Hydrocarbons**  
**Cherry Aerospace (Former Textron Fastening Systems) Facility**

Area of Interest	Location Description	Location ID	Sample Depth	Date Collected	Sample Type	GRO	T/R Hydrocarbons: C10-C18	T/R Hydrocarbons: C18-C28	T/R Hydrocarbons: C8-C40 Total
Former Parts Washer	Heat Treat Area (CAE Ranschoff Equipment area)	PW1-HP1	10	1/27/2008		1.2	0.20 U	0.20 U	0.20 U
Former UST (unknown product)	North of Maintenance Shop	UST2-HP1	10	1/22/2008		0.20 U	0.050	0.085	0.14

Notes:  
 Results are in mg/L  
 GRO = Gasoline Range Organics  
 Samples analyzed by EPA Method 8015 Modified

Table 4-9  
Summary of Groundwater Analytical Results - Metals  
Cherry Aerospace (Former Textron Fastening Systems) Facility

Area of Interest	Location Description	Location ID	Depth or Screened Interval	Date Collected	Sample Type	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Thallium	Vanadium	Zinc
Background/Potential Upgradient Sources	MCLs					0.006	0.01	0.004	0.005	0.05	NE	1.3 (AL)	0.015 (AL)	2	NE	0.1	0.05	0.002	0.050 (NL)	5.0#	
	Asphalt-paved driveway, NE corner of property	MWY5	42-52	5/13/2010		0.010 U	0.020 U	0.030	0.0060 U	0.0060 U	0.0060 U	0.0060 U	0.010 U	0.010 U	0.20 U	0.010 U	0.010 U	0.020 U	0.030 U	0.060 U	0.020 U
	Asphalt-paved driveway, NW corner of property	MMZ5	42-52	5/11/2010		0.0060 U	0.010 U	0.022	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0050 U	0.0050 U	0.20 U	0.0050 U	0.0050 U	0.035	0.015 U	0.0034	0.014
	Former Parts Washer and Degreaser Inside Building	MMX5	36-48	5/11/2010	Duplicate	0.0060 U	0.010 U	0.023	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0050 U	0.0050 U	0.20 U	0.0050 U	0.0050 U	0.035	0.015 U	0.0034
Potential Offsite Source to East	South of dry water sump building	MMW5	43-53	5/12/2010		0.0060 U	0.010 U	0.028	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0050 U	0.0050 U	0.20 U	0.0050 U	0.0050 U	0.035	0.015 U	0.0034	0.010
	Southwest corner of manufacturing building	MMV5	42-53	5/12/2010		0.0060 U	0.030 U	0.029	0.015 U	0.015 U	0.015 U	0.015 U	0.025 U	0.025 U	0.20 U	0.025 U	0.025 U	0.025 U	0.075 U	0.075 U	0.015 U
Former Parts Washer, Chemical Booths, and Former Cherrylock Degreaser	Southwestern side of manufacturing building	MMW5	42-60	5/12/2010		0.0050 U	0.010 U	0.024	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0050 U	0.0050 U	0.20 U	0.0050 U	0.0050 U	0.010 U	0.015 U	0.0035	0.010 U
Former Solvent Storage Area, Drum Storage Area, A57's, and Chemical Storage Building	South of chemical storage building along property line	MMW5	42-47	5/18/2010		0.042	0.050 U	0.040	0.015 U	0.015 U	0.015 U	0.023	0.025 U	0.025 U	0.20 U	0.025 U	0.025 U	0.050 U	0.075 U	0.37	0.033
	Wastewater Collection Sump and Steam Cleaning Shed near the property line	MMW5	37-47	5/17/2010		0.0050 U	0.010 U	0.014	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0050 U	0.0050 U	0.20 U	0.0050 U	0.0050 U	0.010 U	0.015 U	0.0055
Existing Wastewater Sumps Along Southwest Property Boundary	Southwestern portion of property, head of wastewater treatment compound	MMW5	41-48	5/14/2010		0.0050 U	0.010 U	0.030	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0050 U	0.0050 U	0.20 U	0.0050 U	0.0050 U	0.014	0.015 U	0.0043	0.010 U
Former Parts Washer	Heat Treat Area (CAE Ranshoff Equipment area)	PW1-HP1	10	1/27/2008		0.0062	0.011	0.11	0.0032	0.0061	0.032	0.061	0.047	0.016	0.20 U	0.010	0.18	0.010 U	0.019	0.083	0.13
Former UST (unknown product)	North of Maintenance Shop	UST2-HP1	10	1/22/2008		0.0050 U	0.010 U	0.082	0.0030 U	0.0073	0.0052	0.025	0.023	0.0050 U	0.20 U	0.022	0.026	0.010 U	0.015 U	0.018	0.047
Sump at southwest corner of wastewater treatment unit	Southwestern portion of site	WTP-HP1	20	1/29/2008		0.0050 U	0.011	0.14	0.0030 U	0.033	0.085	0.036	0.085	0.033	0.20 U	0.054	0.067	0.011	0.015 U	0.061	0.18
Background sample	Northern property line	BS-HP1	20	1/29/2008		0.0050 U	0.010 U	0.23	0.0030 U	0.0074	0.040	0.021	0.087	0.036	0.21	0.023	0.038	0.010 U	0.015 U	0.061	0.24

Notes:  
Results are in  $\mu\text{g/L}$  for all metals, except mercury which are  $\text{ng/L}$ .  
Only results detected in at least one sample are presented in this table.  
100 U = Nondetected result at a reporting limit of 100.  
BOLD values exceed MCL.  
J = Estimated value.  
MCL = California Maximum Contaminant Limit (California Code Regulation, Title 22).  
AL = Action Level.  
NE = Not Established.  
NL = Non-detect Level. Notification levels are health-based advisory levels established by California Department of Public Health for chemicals in drinking water that lack MCLs.  
# = Secondary MCL.  
Samples analyzed by EPA Method 8010/7470.

## **Attachment 5**

### **Tank Schedule**



**Table 1**  
**TANK SCHEDULE**

Tank Number	Year In Service	Vessel Description	Size (LxWxD) or Ø	Gross Volume (gallons)	Net Volume (gallons)	Wall thickness (Inches)	Secondary Containment (gallons)
<b>Unit 1 (Metals Waste)</b>							
4T-1	~2006	Alkali Collection Tank (Polyethylene)	10'Ø x 98"	4,650	4,650	1/4	27,500
4T-2	~1982	Alkali Containment Sump (Concrete)	25' x 20' x 100"	31,200	27,500	6	N/A
4T-3	~2006	Cyanide Collection Tank (Polyethylene)	10'Ø x 98"	4,650	4,650	1/4	27,500
4T-4	~1982	Cyanide Containment Sump (Concrete)	25' x 20' x 100"	31,200	27,500	6	N/A
4T-5	~2006	Chrome Collection Tank (Polyethylene)	10'Ø x 98"	4,650	4,650	1/4	27,500
4T-6	~1982	Chrome Containment Sump (Concrete)	25' x 20' x 100"	31,200	27,500	6	N/A
1T-1	~1982	Surge Tank (FRP)	11' x 34" x 5'	1,150	700	1/2	1,500
1T-2	~1982	Cyanide Oxidation Tank (FRP)	12' x 5' x 58"	2,150	1,780	5/8	25,800
1T-2(A&B)	~2006	Cyanide Ion Exchange Tanks (FRP)(SC)	14"Ø x 48"	25	25	3/16	50
1T-3 (A-D)	~1982	Chrome Reduction Tanks (FRP)	8' x 5' x 5'	1,500	1,300	1/2	1,500
1CL-1	~1982	Lamella Clarifier (Mild Steel)	72" x 78" x 216"	5,200	4,700	1/4	25,800
1T-4	~1982	Sludge Thickener (Polyethylene)	11' Ø x 15'	5,400	4,800	5/8	25,800
<b>Unit 3 (Metals Waste Dryer)</b>							
1DR-1	~2006	Metal Sludge Dryer (Mild Steel)					25,800
<b>Unit 2 (Oily Waste)</b>							
2T-1	~1982	Oily Water Pool (Concrete)	42.5' x 20' x 8'	51,000	38,000	6	N/A
2T-2	~1982	Oily Pool Sump (Concrete)	7.5' x 20' x 8'	9,000	6,700	6	N/A
2T-3 (A&B)	~1982	Oily Waste (FRP)	192" x 174" x 64"	9,140	6,860	1/2	25,800
2T-4(A&B)	~1982	Oily Treatment (Polypropylene)	84" x 48" x 36"	630	525	3/4	25,800
2CL-2	~1997	Lamella Clarifier (Mild Steel)	72" x 78" x 216"	5,000	4,500	1/4	25,800
2T-5	~1997	Sludge Thickener (Polyethylene)	120"Ø x 190"	7,000	6,400	5/8	25,800
<b>Unit 4 (Oily Waste Dryer)</b>							
2DR-1	~2006	Oily Waste Dryer (Mild Steel)	3.5' x 2' x 2'	120	90	1/4	25,800
<b>Chemical Storage</b>							
3T-1	~2000	Sulfuric Acid (Polyethylene) (SC)	42"Ø x 50"	300	265	1/4	25,800
3T-2	~2000	Sodium Hydroxide (Polyethylene) (SC)	42"Ø x 50"	300	265	1/4	25,800
3T-3	~2000	Sodium Hypochlorite (Polyethylene)	42"Ø x 50"	300	265	1/4	25,800
3T-4	~2000	Sodium Bisulfite (Polyethylene)	52"Ø x 72"	450	420	3/8	25,800
3T-4A	~2000	Sodium Bisulfite (Polyethylene)	42"Ø x 50"	300	265	1/4	25,800
3T-5A	~1982	Hydrochloric Acid (Polyethylene)	42" x 36" x 36"	275	275	~3/8	25,800
3T-7	~2006	Anti-Foaming Agent (Polyethylene)	24"Ø x 36"	55	55	1/4	25,800
3T-8	~2000	93% Sulfuric Acid (Polyethylene)	60"Ø x 84"	1,000	1,000	1/4	9,388
3T-9	~2008	Sodium Hydroxide (Polyethylene) (SC)	72"Ø x 120"	1,700	1,700	3/8	6,190
3T-10	~2003	Sodium Hypochlorite (12.5%) (Polyethylene)	60"Ø x 103"	2,000	1,600	5/16	6,190
3T-11	~2000	Caustic Alkali Liquids (Polyethylene)	42"Ø x 50"	300	265	1/4	25,800
3T-14	~2007	Wastewater Compound (Stainless Steel)	24" x 40" x 36"	150	150	3/16	25,800
3T-15	~2008	Odor Neutralizer (Polyethylene)	24"Ø x 48"	90	90	3/8	1,500
<b>Other and Inactive</b>							
4T-13	~1982	Weir Box (FRP)	90" x 47" x 47"	850	530	1/2	1,500
9	~2006	Hydrochloric Acid (Polyethylene)	24"Ø x 36"	55	55	1/4	1,500
1	~1982	Sand Filter (Mild Steel) (Inactive)	108"Ø x 216"	5,000	4,370	1/4	N/A
2	~2005	Cyanide Backup Storage Tank (Inactive)	72"Ø x 108"	1,900	1,900	1/2	N/A
3	~2005	Chrome Backup Storage Tank (Inactive)	72"Ø x 84"	1,480	1,480	1/2	N/A
4	~1981	Sodium Hydroxide (Mild Steel) (Inactive)	96"Ø x 156"	5,000	4,900	N/A	N/A
5	~1982	Soap Wastewater (PVC) (Inactive)	56" x 48" x 36"	400	295	1/2	N/A

(SC) Denotes Dedicated Tank Containment in Addition to Secondary Containment

## **Attachment 6**

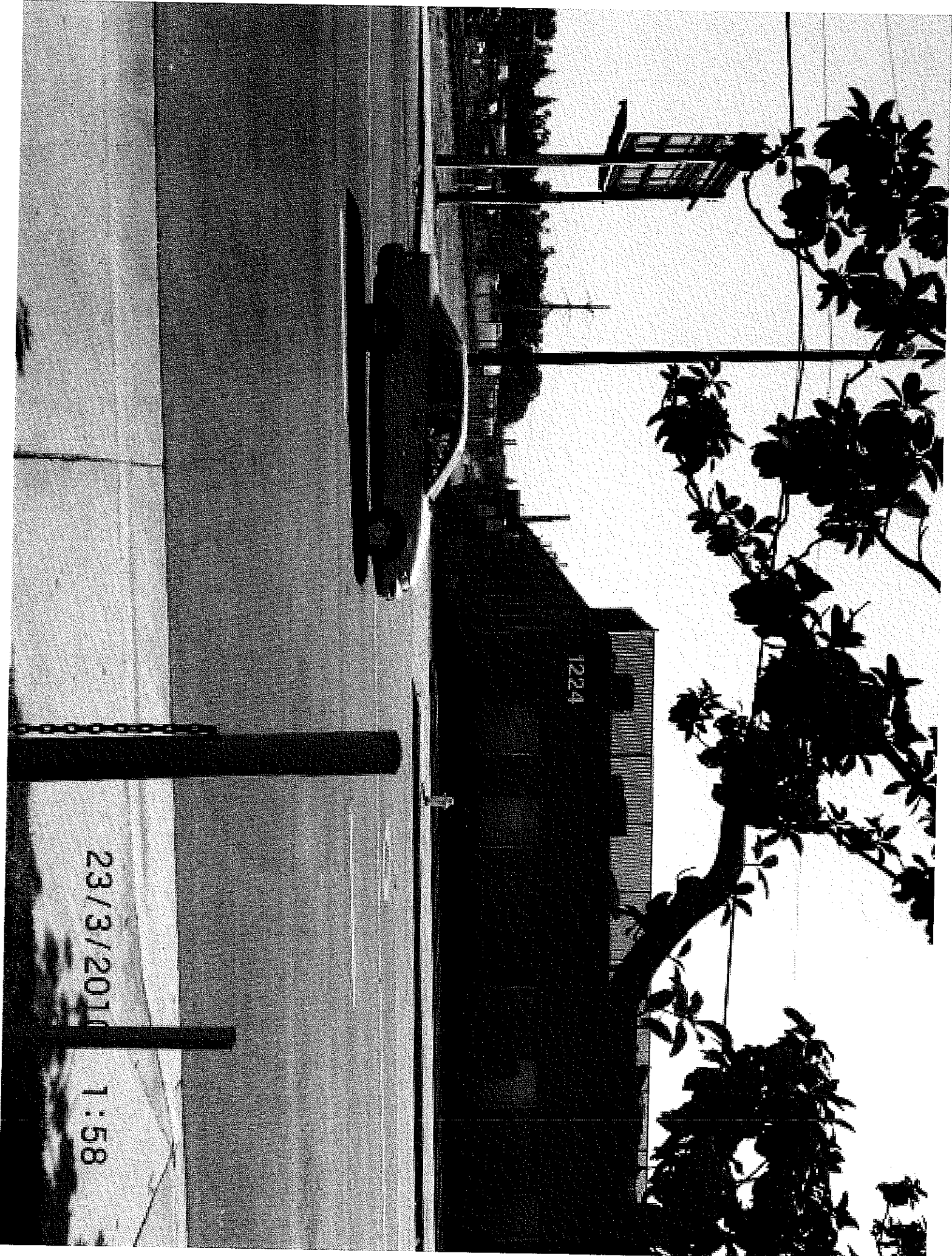
### **Site Photos**



23/3/2010 2:00








23/3/2010 1:58

23/3/2010 2:00

# **Attachment 7**

## **EnviroStor Site Map**

[LINK TO THIS MAP](#) | [ENVIROSTOR HOME](#) | [MANAGE PROJECTS](#) | [REPORTS](#) | [SEARCH](#) | [LOGOUT](#)



# ENVIROSTOR

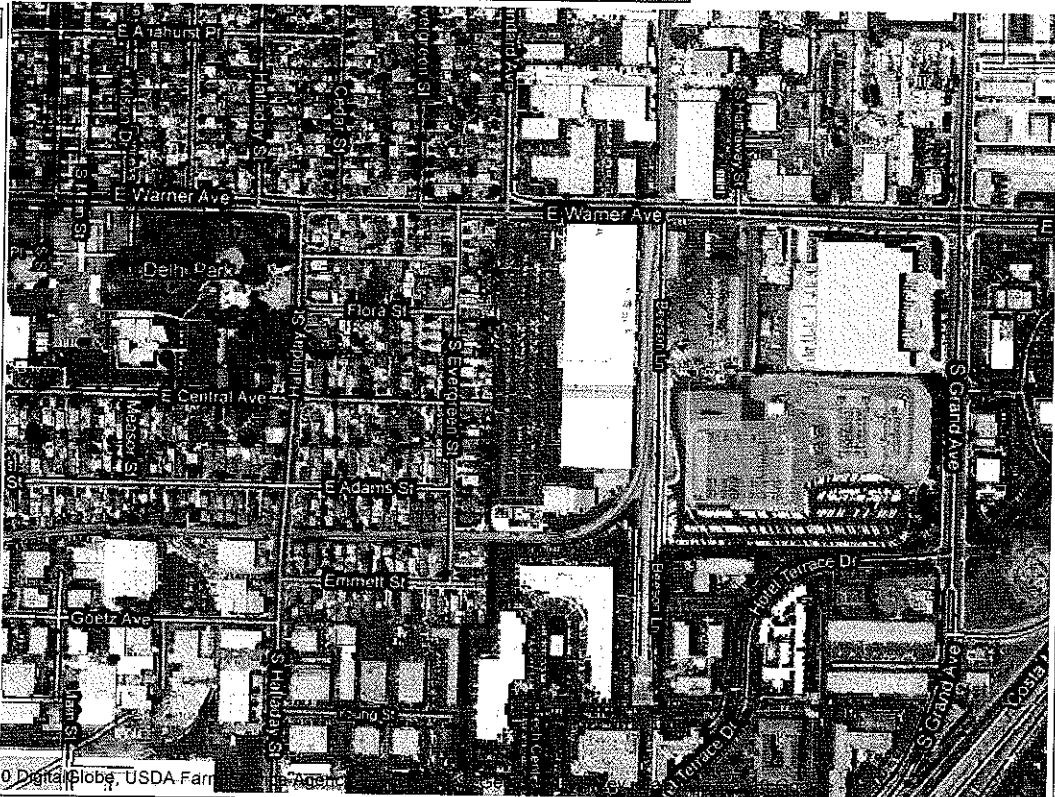
**LAYERS**

- ☒ Federal Superfund
- ☒ State Response
- ☒ Voluntary Cleanup
- ☒ School Cleanup
- ☒ Evaluation
- ☒ School Investigation
- ☒ Military Evaluation
- ☒ Corrective Action
- ☒ Haz Waste Permit
- ☐ GeoTracker LUFT
- ☐ GeoTracker SLIC
- ☐ Public Water Wells

**MAP SIZE**

640x480

15 Sites



Imagery ©2010 DigitalGlobe, USDA Farm Service Agency

**SITE LIST**

PROJECT NAME	PROJECT TYPE	ADDRESS	CITY
CHERRY AEROSPACE	CORRECTIVE ACTION	1224 E WARNER STREET	SANTA ANA
DICEON ELECTRONICS	EVALUATION	2215 S STANDARD AVE	SANTA ANA
DIESEL LOGISTICS	EVALUATION	1331 E. WARNER AVE	SANTA ANA
EMBEE PLATING	CORRECTIVE ACTION	2144 SOUTH HATHAWAY	SANTA ANA
EXTRUDED PLASTICS COMPANY	EVALUATION	2201 SOUTH STANDARD AVENUE	SANTA ANA
GALLADE CHEMICAL INC.	CORRECTIVE ACTION	1230 E SAINT GERTRUDE PL	SANTA ANA
GE PLASTICS	EVALUATION	1831 E CARNEGIE AVE	SANTA ANA
GEMINI INDUSTRIES INC.	CORRECTIVE ACTION	2212 S. MAIN ST	SANTA ANA

MAP AN ADDRESS: 1224 E WARNER AVENUE SANTA ANA, CA 92705